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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/287,264 04/07/99 AGIN

P Q053917

EXAMINER

WM02/0228

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WASHINGTON DC 20037-3213

MOORE, J

ART UNIT

PAPER NUMBER

2682

DATE MAILED:

02/28/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Office Action Summary</b>	<b>Application</b> 09/287,264	<b>Applicant(s)</b> AGIN ET-AL.	
	<b>Examiner</b> James K Moore	<b>Art Unit</b> 2682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 10 and 12-18 is/are rejected.
- 7) ☒ Claim(s) 8 and 11 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 1999 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some    \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

- |   |  |
|---|--|
| 15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>8</u> | 20) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Drawings*

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

### *Specification*

2. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;

Art Unit: 2682

(3) if a chemical compound, its identity and use;

(4) if a mixture, its ingredients;

(5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

The Examiner suggests that a more detailed disclosure of the invention be included in the Abstract.

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Art Unit: 2682

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 1, 3-7, 10, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Vembu. Regarding claim 1, Vembu discloses a method for improving the performance of a mobile radiocommunication system using a power control algorithm, the method comprising: regularly estimating if a criterion is met (received signal-to-noise ratio is below a nominal level) as to whether the power control algorithm (tracking mode algorithm) should better be deactivated; and deactivating the power control algorithm if the criterion is met. See col. 4, lines 18-57, col. 6, lines 18-67, and Figure 3.

Regarding claim 3, Vembu discloses everything claimed as applied to claim 1 (see above), and additionally discloses that the deactivation includes performing a different algorithm (burst mode algorithm) instead. See Figure 3.

Regarding claim 4, Vembu discloses everything claimed as applied to claim 3 (see above), and in addition, his algorithms are chosen in a group comprising closed-loop and open-loop power control algorithms (both are closed-loop algorithms.) See col. 4, lines 18-57 and col. 6, lines 18-67.

Regarding claim 5, Vembu discloses everything claimed as applied to claim 1 (see above), and additionally discloses that the power control method comprises:

Art Unit: 2682

regularly estimating if the criterion is met as to whether the power control algorithm should better be deactivated, when activated, or activated, when deactivated; and deactivating, or activating the power control algorithm if the corresponding criterion is met. See col. 4, lines 18-57, col. 6, lines 18-67, and Figure 3.

Regarding claim 6, Vembu discloses everything claimed as applied to claim 1 (see above), and additionally discloses that the power control method includes a provision which prevents the algorithm from deactivating or activating too frequently: modification of the signal-to-noise ratio threshold to be a range of values, rather than a single value. See col. 7, lines 1-6.

Regarding claim 7, Vembu discloses everything claimed as applied to claim 1 (see above), and additionally discloses that estimation as to whether the criterion is met is based on an estimation of a deviation value, representative of a deviation between an estimated transmission quality (signal-to-noise ratio of a received signal) and a target transmission quality (signal-to-noise threshold value). See col. 4, lines 18-57 and col. 6, lines 18-67.

Regarding claim 10, Vembu discloses everything claimed as applied to claim 7 (see above), and additionally discloses that the estimated transmission quality is represented by a received signal power (signal-to-noise ratio). See col. 4, lines 18-57 and col. 6, lines 18-67.

Regarding claim 14, Vembu discloses everything claimed as applied to claim 1 (see above), and additionally discloses that the power control method may be implemented in any communication system and further mentions the use of power

Art Unit: 2682

control methods in CDMA communication systems. See col. 1, lines 36-53 and col. 3, lines 32-40.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vembu in view of Chen. Regarding claim 2, Vembu discloses everything claimed as applied to claim 1 (see above) but does not disclose that the deactivation includes performing the algorithm with a relatively higher repetition period. However, Chen discloses a power control method in which deactivation of a power control algorithm includes performing the algorithm with a relatively higher repetition period (switching between slow and fast power control feedback modes). See col. 2, line 49 through col. 3, line 23. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Vembu's power control method with Chen's teaching by performing the power control algorithm with a relatively higher repetition period if the signal-to-noise ratio falls below the nominal value in order to adapt the operation of the power control algorithm to the environment of the radiocommunication system.

Art Unit: 2682

8. Claims 9, 12, 13 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vembu in view of well known prior art (MPEP 2144.03). Regarding claim 9, Vembu discloses everything claimed as applied to claim 7 (see above) but Vembu fails to disclose that the estimated transmission quality is represented by an estimated signal-to-interference ratio. However, the Examiner takes Official Notice that it is conventional and well known in the art to determine the quality of a transmission based on the measured signal-to-interference ratio. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Vembu's invention by representing the estimated transmission quality by an estimated signal-to-interference ratio because it is conventional and well known in the art to determine the quality of a transmission based on the measured signal-to-interference ratio.

Regarding claims 12 and 13, Vembu disclose everything claimed as applied to claim 1 (see above), but Vembu fails to disclose whether the method is performed in the uplink or downlink transmission direction of the mobile radiocommunication system. However, the Examiner takes Official Notice that it is conventional and well known in the art to perform power control in both the uplink and downlink transmission directions of mobile radiocommunication systems. It would have been obvious to one of ordinary skill in the art at the time of the invention to perform Vembu's power control method in either the uplink or downlink transmission direction of the mobile radiocommunication system because it is conventional and well known in the art to perform power control in both directions.



Regarding claims 15 and 17, Vembu discloses everything claimed as applied to claim 1 (see above), and additionally discloses a mobile radiocommunication network entity/mobile station (104A) comprising, for performing the power control method: means (112A) for performing the method, and means (108A) for sending corresponding power control commands to a mobile station/network entity (104B). See col. 4, lines 18-57 and col. 6, lines 18-67.

Regarding claims 16 and 18, Vembu discloses everything claimed as applied to claim 1 (see above), and additionally discloses a mobile station/network entity (104B), comprising, for performing the method: means (112B) for receiving power control commands from a mobile radiocommunication network entity/mobile station (104A), according to the method. See col. 4, lines 18-57 and col. 6, lines 18-67.

### ***Allowable Subject Matter***

9. Claims 8 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Regarding claim 8, the cited prior art fails to disclose a method for improving the performance of a mobile radiocommunication system using a power control algorithm, wherein estimation as to whether a criterion for deactivating the power control algorithm is met includes: an estimation of a first deviation value, which would have been obtained if the power control algorithm had always been activated, on a given time-interval on which the deviation value is estimated; an estimation of a second deviation value, which would have been obtained

• Art Unit: 2682

if the power control algorithm had never been activated, on the given time-interval on which the deviation value is estimated; and a choice between activation and deactivation of the algorithm depending on which of the first and second deviation values is the lowest.

Regarding claim 11, the cited prior art fails to disclose a method for improving the performance of a mobile radiocommunication system using a power control algorithm, wherein estimation as to whether a criterion for deactivating the power control algorithm is met is based on an estimation of a deviation value, which is represented by the variance of an estimated transmission quality.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 305-9051, (for formal communications intended for entry)

**Or:**

(703) 305-9508 (for informal or draft communications, please label "PROPOSED"

or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ken Moore, whose telephone number is (703) 308-6042. The Examiner can normally be reached on Monday-Friday from 8:00 AM - 4:30 PM.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

  
**MARSHA D. BANKS-HAROLD**  
**PRIMARY EXAMINER**

Application/Control Number: 09/287,264

Page 10

Art Unit: 2682

Ken Moore  
02/26/01